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09/966,424	09/28/2001	Kari M. Maki	FORSAL-25	6386

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EXAMINER

NGUYEN, TAN D

ART UNIT PAPER NUMBER

3629

DATE MAILED: 05/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

09/966,424

**Applicant(s)**

MAKI, KARI M.

**Examiner**

Tan Dean D. Nguyen

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-11, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-11, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

The amendment filed 1/12/05 has been entered. Claims 19, 20, 2-11 remain active.

### ***Claim Rejections - 35 USC § 112***

1. Claims 19, 20, 2-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The 1<sup>st</sup> step of independent claims 19, 20 calls for "gathering information related to manufacturing processes and machinery of the production plant by at one information system which supervises and controls the process of the production plant" is vague and indefinite because it's not clear how a step of "gathering information" by a "information system" alone can perform both the supervising and controlling the process of a production plant which normally requires computer controller and supervisory system with control valves or actuators to control the process. Mere gathering information alone is insufficient to carry out any supervising and controlling steps. See LAVIGNE Fig. 14-7, 15-13, 16-4 for a typical computer system for supervising and controlling a process.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19 (method<sup>1</sup>), 20, 2-11 (method<sup>2</sup>) are rejected under 35 U.S.C. 103(a) as being unpatentable over (R<sup>1</sup>) EP 0 822 473 in view of (R<sup>2</sup>) LAVIGNE and (R<sup>3</sup>) MOTOYAMA (US Patent 5,909,493) or further in view of (R<sup>4</sup>) EP 0 825 506.

As for Independent method<sup>1</sup> claim 19, in a remote method and apparatus for maintenance process, EP 0 822 473 fairly discloses a method for servicing a production plant (industrial and manufacturing apparatus, such as manufacturer of semiconductor device) comprising the steps of:

a) gathering information related to the manufacturing processes and machinery equipments (106) of a production (or manufacturing) plant (102, 103, 104) by means of at least one information system and/or measurement unit and/or production control unit (equipments 106);

b) connecting a service system server (host computer 107 which inherently contains a file server) to a local information network (106, 109) of the production plant;

c) collecting informations from different systems (#106) of the production plant to the service system server (107);

d) sending the collected information from the production plant to a remote service unit (vendor unit) (108) wherein the information submitted from the production plant is collected and analyzed (Figs. 3-5),

f) isolating the information network of the service unit from the Internet by a firewall;

g) and transferring the information bi-directionally via the firewall between the production plant and the information network of the service unit in a secured format;

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wherein data signal is transferred between the production plant and the service unit plant (Fig. 1, Fig. 2, col. 3, lines 4-58, col. 4, lines 3-48, col. 7, lines 22-26).

As for the limitation of "from the group consisting of a paper mill, ....paper finishing plant ", it would have been obvious to apply the same teaching to other similar manufacturing facility, i.e, manufacturing pulp, paper or oil, etc., to obtain similar results, absent evidence of unexpected results. Note that on col. 10, lines 22-25, EP 0 822 473 discloses that "various changes and modifications can be made within the scope of the invention" and the selection of other type of manufacturing facility is considered as immaterial change or modification to a person of ordinary skill at the time of the invention. Alternatively, the use of file server instead of peer-to-peer server or computer handle other information form other sources would have been obvious as using a highly special computer with larger storage to serve other computers using the network.

As for the new limitation of "which supervises and controls ... finishing plant", this carries no patentable weight because it's not positive claimed. The step of "gathering information" alone cannot "supervises and controls the process of the production plant". To supervise and control the process, one has to gather the information from sensor, then feed the information to the process controller (computer), compute and compare the signal with desired set point, send out the signal to a control actuator such as a valve, and then control the process by opening or closing the valve. Therefore, step (a) of "gathering information" alone is insufficient or incapable of supervising and controlling the process. Therefore, EP 0 822 473 discloses the claimed invention except for (1) a production plant selected from the group consisting of a paper mill, board mill, pulp

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production plant, and a paper finishing plant in the preamble and step (a) above and (2) isolating the internal information network of the production plant from the Internet by a firewall.

LAVIGNE is merely cited to teach well known and basis instrumentation applications for the pulp and paper industry (1979) wherein computer network are set up in a typical production plant, i.e. pulp mill or paper mill/board mill, and paper finishing plant comprising gathering information related to manufacturing processes and machinery of the production plant by at least one information system, measurement unit and production control unit wherein information is collected, analyzed and a controller is used to supervise and control the process {see Figs. 14-7, 14-8, 15-1, 15-2, 15-13, 15-14, 15-15, 16-1 (paper mill, paper machine, and finishing plant) and 16-4 (computer system, server)}. It would have been obvious to modify the teaching of EP 0 822 473 by selecting other type of industrial or manufacturing plant, such as pulp and paper mill, as merely applying similar process to other similar manufacturing product to achieve similar result, absent evidence of unexpected results. Note that this follows within the immaterial "various changes and modifications can be made within the scope of the present invention" of EP 0 822 473 on col. 10, lines 22-25. Note that LAVIGNE teaches the "process control computer applications in the paper industry" which normally covers 3 general areas such as pulp mill, paper mill, and operations involves utilities and by-products such as paper finishing plant or power plant.

MOTOYAMA is cited to teach well known step or means for additional security measure used in connecting a computer network to the Internet a protective device

known as firewall to allow only authorized computers/users to access a network or other computer via the Internet (see fire wall 14, fire wall 50, fire wall 40) (see Fig. 1, col. 4, lines 15-25). It would have been obvious to modify the process of EP 0 822 473 by providing a firewall to isolate the internal information network of the production plant from the Internet to provide additional security measure as taught by MOTOYAMA above.

In a similar method and apparatus for remote process control, EP 0 825 506 discloses the use of a central information service system server (20) for collecting information from local information systems (measurement units, sensing devices, etc) (19a-19e) and responsible for establishing communications over the Internet network with remote service unit (col. 3, lines 40-50, col. 4, lines 15-55). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the process of EP 0 822 473 / LAVIGNE / MOTOYAMA to include a central information service system server for collecting local information network of the production plant as taught by EP 0 825 506 for establishing communications over the network.

4. **As for Independent method<sup>2</sup> claim 20** which has the same steps (a)-(g) as in independent claim 19, it's rejected for the same reasons set forth in claim 19 above and furthermore, the teachings of steps "(h) scheduling maintenance periods ... and (i) anticipating future needs of servicing based on the continuous data collection" are fairly taught in EP 0 822 473 in col. 10, lines 5-15 "troubles can be prevented in advance", Figs. 2, 3, and 6 "501 Trouble databases", col. 7, lines 10-15 "information as part of

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the trouble database can be disclosed to users (factories) and each user can access various kinds of past maintenance information through the Internet and employs an appropriate countermeasure against his own troubles" which normally involves scheduling proper downtime for maintenance or installing spare or new parts to avoid malfunctions. Note that the various maintenance scenarios and planning of operations are within the skilled of the artisan in view of the general teachings and would have been obvious to a skilled artisan to modify the plans to suit each manufacturing facility.

**As for the amended language**, this is fairly taught in LAVIGNE as shown above. Alternatively, inclusion of any other well known systems in any manufacturing facility, maintenance information, machinery condition monitoring, and reporting system for reporting the data above, would have been obvious to a skilled artisan as mere inclusion of other well known plant control/monitoring parameters.

**As for dep. claim 2** (part of 20), MOTOYAMA discloses the network (16) within the confines of firewall 14 prior to connecting to the Internet (10), therefore the disclosure of a similar setup of a firewall connected between the Internet and the system service server would have been obvious to avoid unauthorized access to the server from the Internet network.

**As for dep. claim 3** (part of 20), the treating and processing of data are fairly taught in EP 0 822 473 Fig. 3, col. 5, lines 5-30.

**As for dep. claim 4** (part of 20), the general limitation of securing the network using well known means such as password, ID addresses, or ID codes is fairly taught by EP 0 822 473 on col. 7, lines 23-35 or would have been obvious to an artisan.



**As for dep. claim 5** (part of 20), this is inherently in the process of EP 0 822 473 wherein the host computer (108) is in the vendor's area which is normally remote from the manufacturing plant (see abstract, col. 6, lines 15-30, Fig. 4).

**As for dep. claim 6** (part of 20), Fig. 1 discloses several factories, 102, 103, 104, see LAVIGNE Figs. 15-1, 15-14, 16-1.

**As for dep. claim 7** (part of 20), this is inherently included in the system of EP 0 822 473/MOTOYAMA when the information is sent between the systems in a standard format.

**As for dep. claim 8** (part of 20), the analysis step is taught in EP 0 822 473 Fig. 2, 3, 5.

**As for dep. claims 9-10** (part of 20), the recommendation step is taught on Figs. 3-5 of EP 0 822 473.

**As for dep. claim 11** (part of 20), the transfer of data signals are inherently included and taught in EP 0 822 473 col. 3 lines 5-55 or digital data processors 12, 14 of Fig. 1.

**5. Claims 19, 20, 2-11 are rejected (2<sup>nd</sup>) under 35 U.S.C. 103(a) as being unpatentable over EP 0 822 473 in view of LAVIGNE and MOTOYAMA (or EP 0 825 506) and further in view of Article 8/1996.**

**As for independent claims 19, 20**, the teachings of EP 0 822 473/LAVIGNE/MOTOYAMA/or EP 0 825 506 is cited above. Article 8/1996 is cited to show it's well known put the paper mill on the Internet to improve the efficiency of mill communication with the benefits of the Internet (Article 8/1996). It would have been obvious to modify

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the teaching of EP 0 822 473/LAVIGNE/MOTOYAMA or EP 0 825 506 by collecting information from other similar manufacturing or production plant such as pulp mill or paper mill for the benefit as cited in Article 8/1996.

**As for dep. claims 2-11 (part of 20),** they are rejected for the same reason set forth above.

### **Response to Arguments**

6. Applicant's arguments (3) filed 1/12/05 have been fully considered but they are not persuasive.

1. Applicant's comment that the new amended language of (1/12/05) is not taught in EP 0 822 473 is not persuasive for the following reasons:

(1) The step of "gathering information" alone cannot "supervises and controls the process of the production plant". To supervise and control the process, one has to gather the information from sensor, then feed the information to the process controller (computer), compute and compare the signal with desired set point, send out the signal to a control actuator such as a valve, and then control the process by opening or closing the valve. Therefore, step (a) of "gathering information" alone is insufficient or incapable of supervising and controlling the process.

(2) the limitation of "supervising and controlling the process of production plant" is taught in LAVIGNE and would have been obvious to further control the process since digital process computer control system is very beneficial as cited in LAVIGNE page 242, 2<sup>nd</sup> paragraphs "primary incentives for installing a digital process computer control system ... {see 5 benefits}".

2. The statement that "the system of LAVIGNE is very hierarchic and complex" and would not be obvious to person of ordinary skill to combine with EP 0 822 473 is noted; however, this is not found to be persuasive because LAVIGNE is merely cited to teach well known and basis instrumentation applications for the pulp and paper industry

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(1979) wherein computer network are set up in a typical production plant, i.e. pulp mill or paper mill/board mill, and paper finishing plant comprising gathering information related to manufacturing processes and machinery of the production plant by at least one information system, measurement unit and production control unit wherein information is collected, analyzed and a controller is used to supervise and control the process {see Figs. 14-7, 14-8, 15-1, 15-2, 15-13, 15-14, 15-15, 16-1 (paper mill, paper machine, and finishing plant) and 16-4 (computer system, server)}. It would have been obvious to modify the teaching of EP 0 822 473 by selecting other type of industrial or manufacturing plant , such as pulp and paper mill, as merely applying similar process to other similar manufacturing product to achieve similar result, absent evidence of unexpected results. Note that this follows within the immaterial "various changes and modifications can be made within the scope of the present invention" of EP 0 822 473 on col. 10, lines 22-25.

3. The elements included are typical in any manufacturing facility for effective monitoring of the whole plant if desired, mere selection of other manufacturing product, from semiconductor to pulp or paper or oil or any other manufacturing facilities would have been obvious to a skilled artisan as mere applying the same process to other similar product to obtain similar results, absent evidence of unexpected results. Note that on col. 1, lines 6-12, EP 0 822 473 mentions "industrial equipment requiring maintenance, such as a semiconductor device manufacturing apparatus" which indicates the type of industrial plant is not critical and the same process can be applicable to any manufacturing facility. Note that on col. 10, lines 22-25, EP 0 822 473

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discloses that "various changes and modifications can be made within the scope of the invention" and the selection of other type of manufacturing facility is considered as immaterial change or modification to a person of ordinary skill at the time of the invention. Therefore, applicant have not shown why it's not obvious to apply the teaching EP 0822473 to other industries.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (previous action).

1. US Patent:

1) US Patent 5,632,859 and 6,024,835 discloses various manufacturing systems, control, maintenance, machinery conditions, etc. in a paper mill.

2. NPL:

1) Article "Fisher-Rosemount...Association Inc." is cited to teach the use of web site to allow user to see a virtual chemical plant, refiner, or pulp and paper mill.

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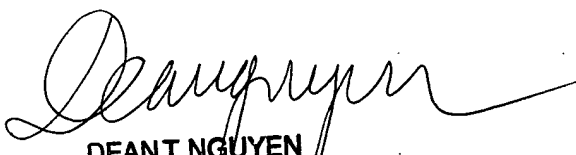
9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct@uspto.gov>. Should you have any questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

In receiving an Office Action, it becomes apparent that certain documents are missing, e. g. copies of references, Forms PTO 1449, PTO-892, etc., requests for copies should be directed to Tech Center 3600 Customer Service at (571) 272-3600, or e-mail [CustomerService3600@uspto.gov](mailto:CustomerService3600@uspto.gov).

Any inquiry concerning the merits of the examination of the application should be directed to Dean Tan Nguyen at telephone number (571) 272-6806. My work schedule is normally Monday through Friday from 6:30 am - 4:00 pm. I am scheduled to be off every other Friday.

Should I be unavailable during my normal working hours, my supervisor John Weiss may be reached at (571) 272-6812. The FAX phone numbers for formal communications concerning this application are (703) 872-9306. My personal Fax is (571) 273-6806. Informal communications may be made, following a telephone call to the examiner, by an informal FAX number to be given.

dtn  
May 5, 2005

  
DEANT. NGUYEN  
PRIMARY EXAMINER